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SCHOOL AND SOCIETY

EDITED BY J. McKEEN CATTELL

Volume VIII SATURDAY, OCTOBER 26, 1918 Number 200

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SCHOOL AND SOCIETY

Volume VIII SATURDAY, OCTOBER 26, 1918 Number 200

THE POLICIES OF STATE SUPERINTENDENTS TOWARD STUDENTS ENTERING AGRICULTURAL EMPLOYMENT DURING THE WAR

WHEN on April 6, 1917, our government officially recognized the open warfare being waged against us by the Imperial German government, all loyal institutions began organization on a war basis. The school system hurriedly donned its armor for battle. Courses of study were modified and new community organizations sought to meet the newly created emergencies. Only four days later the chairmen of the county farm bureaus in one state assembled and passed a resolution recommending that the higher institutions of learning and the high schools of the state close within a week or as soon afterwards as possible. The students were urged to help in the production of food. Many institutions granted full credit for the remainder of the year to students enlisting in service. Demands were made for credit by those assisting in the production of food and those entering industries closely related to a successful prosecution of the war. One state superintendent writes, "Letters came pouring in from all parts of the state then, asking that credit be given to the boys and girls who left school for the purpose of assisting in planting the spring crops."

The purpose of this article is to present facts concerning the attempt of the schools to meet the national emergency. The data bears on two periods in the movement, the policies of 1917 and the program for 1918. The writer is content with a statement of facts. Such conclusions as they warrant are left to be drawn by the readers.

A questionnaire was sent to the state superintendents of public instruction. Thirty-two of them responded; eleven filled in the schedule; and twenty-three personal letters were received. The letters vary widely in the amount and character of information contained in them. In some cases there is a full and complete discussion of the general policies adopted. Others are very brief as the one given below. "So far as I know —— has done little or nothing in this matter." This letter comes from a state that is very sparsely populated and in which organization would be very difficult. A request was also made for copies of printed material such as pamphlets, circular letters, etc. Four submitted circular letters describing the plans of 1917, and thirteen supplied pamphlets or circular letters relative to the policies of 1918. In the presentation of the data frequent quotations are made from the different sources so that the readers may appreciate the various points of view.

THE POLICIES OF 1917

The planting season had already opened in the south and was just opening farther to the north when war was declared. Hastily devised plans were inevitable if they were to be applied at once. That only four state superintendents submitted pamphlets or circular letters descriptive of the work of the year indicates its transient character. These school officials were by no means unanimous in their attitude toward or method of dealing with the prob-

lem. In one state "announcement was made that students would be given credit for agricultural work"; in a neighboring one "Credits were given canning club girls who cultivated and canned their one tenth acre"; and in another one it was decided to "have the credit determined by individual schools." A circular letter which appears to have had state-wide distribution in the latter state says, "In some sections of the state the older boys and girls are needed on the farms or in the canning factories or other industries." In one state terms were shortened; vacation periods were redistributed; and school sessions were held in the morning leaving the pupils at liberty to work in the afternoons. Some gave credit only on condition that the pupils showed evidence of successful farm employment for a minimum period. One superintendent writes, "We hold it dishonest and untruthful to credit work on a farm as credit for algebra, etc." Another one says, "Our state last year was not carried away by the fear that there would not be sufficient help on the farms, so our schools did not close until the end of the year." A third one states, "In general school authorities were warned of the danger of permitting the school organization to disintegrate in the excitement of war times." Still another reports, "No credits were given. Where necessary pupils were excused from attendance at school, and were given the standing which they had already attained."

The practises have been summarized by dividing the states into six groups. One state did nothing. Six refused to give unearned credits. Three are in New England; one in the Middle Atlantic section and two in the South. In each of the four states in the North high school boys over sixteen and under twenty-one were organized into working reserves and assisted in farm work. In one of the New England states the legislature made a special appropriation and six hundred boys were mobilized for farm work. The policy adopted was to make it a real service at the sacrifice of school credits. Special opportunities were given for them to make up the work. In the two southern states the normal-school year is much shorter, giving longer vacations. The third group of three states left the matter entirely to the discretion of the local school authorities. Nine granted credits providing the student produced evidence that he had met certain conditions such as secured employment, was above passing, had performed farm services successfully for a designated period, etc. Only four states show evidence of having placed no restrictions on the granting of credits. The evidence is not conclusive in these cases. It is possible that those writing the letters failed to designate such restrictions as were enumerated in the preceding group. The data from nine states are noncommital on the matter. Since a number of them have strong organizations for the current year, it appears probable that students were not granted credits promiscuously in 1917.

In methods of supervision the states show a wide range of practises. Comparatively small portions of the data deal with this phase of the problem. A number of the replies from the state superintendents are listed below. "In 1916–17 there was much dismissal of pupils for work without further attention to the students afterwards." "No supervision was given to work outside of school." "Most schools provided some means of checking up." "A report was asked from the farmer." "Nothing of the sort worked out by us. State employment bureau and county food and crop commissioners did service but not standardized." "The only supervision other than the

teacher was given by the Extension Department of the State University through their Women Demonstrators." "Some districts employed special supervisors to look after the work as manual training or domestic science teacher." "Teachers and superintendents under the direction of the State Department."

A few states show evidence of more constructive progress. The rulings of one state reads, "The local school authorities and the parents should thoroughly investigate the conditions under which the pupil is employed in each individual case, and should be satisfied that the hours of labor, the conditions of living, the remuneration received, and all other conditions affecting the welfare of the pupils are satisfactory before releasing the pupils from school for such employment. Local school authorities are best able to pass upon all these questions, and they should take this responsibility. Girls should be released only for service on the farms and then only when they may be employed in their homes or so near to their homes that they may be under the supervision of their parents." Another state adopted a quite different attitude towards such details. The State Superintendent writes, "Work was so plentiful that any one who wanted it would have had no difficulty in securing it at the prevailing wage paid in that community."

The most careful and detailed plan of supervision has been worked out in the New England States. Massachusetts has three plans for placing students in farm employment. At the request of farmers individual boys are placed in their homes where they are given board and lodging. They are guaranteed a minimum wage of two dollars for the first week and at least twice as much after that period. Some are given employment on farms in the immediate vicinity, in which case they return home for board and lodging. In other cases the boys are located in camps from which they go to the surrounding farms daily. In the last two cases they are insured at least $1.25 per day for the first week and $1.50 for continued employment. These were minimum standards and in cases where boys deserved more the wage was adjusted between the farmer and the camp supervisor. The boys worked six days in the week and the working hours per day were left for local adjustment. Only boys of sixteen years and over of age were enlisted subject to service between May and October 1.

The states have meager information concerning the number of students who applied for and were granted credits. One reports the mobilization of 600 boys and another that 1,600 applied for credit and nearly all of them met the conditions. The other replies are not so definite. One approximates the number at "about 1,000"; a second says, "the number applying was very large"; and a third estimates, "about 2,000."

After their experiences of 1917 these school officials are cautious in giving their approval to this matter of granting credit for work performed outside of the regular school curriculum. Few advantages coming from it are mentioned. Seven state that the same plan will not be followed in 1918. Some have discontinued the practise of granting such credits entirely while others allow them only with very much modified restrictions. Six are satisfied with the results of last year. One of these granted credits promiscuously in 1917. The others belong to the New England group in which the work was closely supervised and in the majority of cases no credit was given. The replies from other states are listed as: "Some good resulted," "Advantages to those who secured the services of the students and a possible increase may have been

made in the production of food stuffs." "Where properly administered and supervised results were satisfactory."

Criticisms are given with much more freedom. A number of the preceding quotations are indicative of the attitudes held by the state superintendents. The replies of others are listed below. "It was unsatisfactory in its results." "It did not prove satisfactory." "Not enough (advantages) to justify us in extending the same privilege to the boys this season." "Not long after that (announcement that credit would be granted) we began receiving letters from parents saying that pupils in their community had been excused from school and given credit for their work and that they were not rendering any particular service. Some even boasted that they had 'gotten by' for that year quite easily." "Schools did not in some cases take sufficient precautions to see that this privilege was accepted and exercised in good faith." "Scheme was abused in effort to get credits." "Lack of uniformity in giving credits." "Too many made it an excuse to leave school." "It is not in the interest of scholarship nor for the welfare of the students to receive credit for school work which is not done." "Disorganized school work, scholastic credit given for that which was not scholarship and a general lowering of the value of the school's worth in the eyes of the people."

THE PROGRAM FOR 1918

Fourteen states openly declare against granting school credit for work performed outside of school. Two others make such a recommendation but are less firm in their statements. One says, "We have not intended to make as general an excuse this year because of the fact that we have known for a year that it is necessary to raise more food and boys should have had their work so arranged that they could be excused without so much disturbance of their courses." The other one puts the case, "It is true that the giving of school credits for work which has not actually been done by the pupil is of little advantage to him, for a credit never takes the place of actual knowledge of the subject in which he is actually enrolled; but such withdrawals ought not to render it necessary for him to do his entire year's work, or an entire semester's work, again." In one state credit is given only in case of enlistment in actual service. Only two show a tendency to offer credit with few or no restrictions.

Five give credit for farm work but with more restrictions and much closer supervision than in 1917. Nine have organized United States Boys' Working Reserves. Eight are undecided or failed to state definitely whether or not credit is to be given.

While the facts show the growth of a sentiment opposed to the granting of school credit for farm work, it has not grown at the expense of a desire to render service in the nation's emergency. Many efforts have been made by these school officials to impress the responsibility of the schools to give assistance. Several have sent letters to all the teachers in the state urging that every possible effort be made to render aid. One state superintendent reports having held conferences with the school authorities in each county at which the matter of organizing Boys' Working Reserves was discussed. Two states urge and one suggests that the high schools follow a six-day-a-week schedule making it possible for the schools to close earlier. Two advise shortening or dispensing with the spring vacation. Another suggests that the spring vacation at least be postponed until after spring work on the farm has opened so that the boys may remain in school longer. Two urge that boys be excused for only two or

three days per week; another proposes to excuse them in relays making it possible for them to keep up their connections with the school. Special classes for these students during the spring and fall are advocated as a means of keeping up their work. One state suggests that in the larger schools those planning to be available for farm work in the spring be grouped in special sections throughout the year. Additional work may thus be given and they will be able to retain their class standings. Vacation classes have been suggested. In one state a bulletin has been prepared suggesting certain topics in each of the high school subjects that should be dealt with while all were in attendance, then supplement the work later on after the boys have left. In another state it is suggested that senior courses close the first of May and the students be permitted to work on the farms for two months which should be given full credit as a form of social service meriting such recognition. One insists that the schools open late in the fall and close late in the summer while another urges that they open early in the fall so they may be closed early in the spring. One advocates the school day beginning at seven o'clock in the morning and closing at one o'clock which would leave the pupils free for the farms, the canning factories, etc., during the afternoon. Many states caution school authorities against closing the elementary school earlier than usual. Many pupils unable to be of assistance in farm work would be released from the schools at a time when no other provision had been made for the expenditure of the leisure time under restraining social influences.

With the exception of the New England and Middle Atlantic States the boys are sent out as individuals to the various farmers in need of farm laborers. A special effort is made to place them on farms in the vicinity of the local schools. They live in the homes of the farmers. The type of farming and the larger scale on which it is conducted in these states make close supervision difficult. The matter is left largely in the care of local school officials. If the local school system employs a special instructor in agriculture, he is usually put in charge. In other cases the superintendent or principal gives personal attention to the supervision.

The states which have organized the United States Boys' Working Reserves have the most systematic plans. Pamphlets descriptive of the organizations in five of the nine states so organized have been received. Four of them work in close cooperation with the State Departments of Public Instruction. They are all closely affiliated with the State Councils of Defense.

Carefully directed advertising campaigns have been conducted. In one state letters were sent to school principals and superintendents, county agents, ministers, editors, commercial clubs, mayors, chairmen of four minute men, women's clubs, county councils of defense, enrolment officers, Y. M. C. A. secretaries, postmasters, bankers and school boards asking their cooperation in the campaigns for organization. Meetings have been called among the farmers and the plan explained to them. Many farmers doubtful of the wisdom of employing city boys have been convinced of their fitness. They have been urged to report the number of boys needed. The local papers have been provided with copy descriptive of the movement. One state set aside one week for the enrolment campaign. Some states issue attractive enrolment certificates. Buttons are given to the boys which signify that they have been enrolled. After a certain amount of work has been successfully performed, they are

presented with badges. In one state they are placed on the same ranking as members of the National Guard. They are designated as "volunteers" and provided with board, lodging, uniforms and medical attendance at the cost of the state. They are mobilized and trained by the state and may be dismissed only on furloughs. Each boy draws one dollar per working day from the state funds.

The boys are required to pursue carefully organized courses in preparation for their farm work. They are taught how to halter, tie, curry, harness, bridle, lead, hitch, drive and unhitch a team; how to saddle a horse and harness and hitch one to a single buggy; how to hitch and drive three and four horse teams; how to take off and put on side boards, wagon boxes and hay racks, and how to haul manure and hay. The use of singletrees, eveners, neckyokes and clevises are explained to them. They are given instructions in how to use and care for plows, listers, harrows, disks, cultivators, mowing machines, hay rakes and manure spreaders and how to repair farm machinery. The importance of careful use, frequent oiling and proper housing of farm machinery is impressed on them. They learn how to put cows in the barn, milk them, separate the milk, feed the calves and care for the cows. They are required to master the principles of feeding hogs, cows, cattle and horses. The agricultural instructor in the local school gives the instruction in many cases. Sometimes retired farmers aid. In other cases the boys are taken out to farms on Saturdays. Local implement dealers often provide machinery for demonstrations. Horses are secured that the training may be of a practical character. The importance of adapting themselves to farm conditions is urged on them. Five states offer some such training to the boys before they go on the farms. One mobilizes them to a training camp; another proposes to take them to the state university; and the other three provide the training in local schools.

In the New England and Middle Atlantic states the boys are sent out as individuals to live with farmers, from their own homes to the surrounding farms returning at night and in groups which work out from centrally located camps. The camps are put under the control of competent supervisors. The life in the camp follows a systematic schedule and in many cases has a semi-military organization. The supervisors look after out-of-work hours, the food, the lodging and the safety of the boys. One state plans to train camp cooks. The supervisors adjust such matters as wages, working hours, etc., between the farmers and the boys.

A number of arguments are advanced in favor of the camps. Capable supervisors are secured from the high-school teaching staff. One state plans a special course of training for them. The camps are provided with games, moving pictures, talking machines, etc., which offer recreation for the boys when not working. The living conditions are more satisfactory. Agreeable comradeship with others in the group keep up the morale. The supervisors are often able to dispel discouragement. The parents feel confident that the boys are being well provided for. It is contended that the camp relieves the farmers of the heavy burden of housing the labor supply. In one camp thirty boys started saving accounts; twenty-seven saved $2,264; about a dozen purchased liberty bonds, and six applied for admission to the agricultural college. One state supported seventeen camps last year and plans to enlist 5,000 boys this season. Another one appropriated $150,000 at the disposal of the Council of National Defense for the purpose of equipping,

training and mobilizing boys for farm labor.

THOMAS J. SMART
NORTH DAKOTA AGRICULTURAL COLLEGE

PROJECT METHODS IN TEACHER-TRAINING COURSES[1]

FOR purposes of our study this afternoon I think we shall find it more satisfactory to discuss this subject as problem project methods in teacher-training courses rather than project methods in teacher-training courses. The term "project" does not mean the same thing to all the people who use it. It probably means one thing to some of us and something somewhat different to others of us. Dr. David Snedden, in an article in SCHOOL AND SOCIETY, described the term project as "a unit of educative work in which the most prominent feature was some form of positive or concrete achievement."

Good pedagogy demands that the subject-matter of a course be divided into teaching units. The most effective teaching unit in teacher-training courses undoubtedly is the problem. This the lecture method formerly in common use in teacher-training classes failed to recognize. It is not strange to us to-day that this method of instruction proved to be even more ineffective for teacher-training work than the lecture method ordinarily works out. Instructors offering teacher-training work, as a rule, were well trained in agriculture but poorly trained in education. They followed the method of teaching they knew best—the lecture method commonly found in agricultural colleges and incidentally one of the poorest methods of teaching.

It did not take the instructors offering these courses long to decide that their work was not being given in that way that would bring about maximum results. The work was passed out to the students at regular intervals in regulation doses. The student rarely knew what was coming in the future; seldom knew much about what he had been given in the past. His reading, if he did any, was done on what had gone before rather than on what was coming. In truth his reading usually consisted in a hurried review of his lecture notes. Such a procedure was not conducive to a well-developed course. The men in charge of the teacher-training work in agriculture were not slow to realize that the instruction was failing to give the help that such courses were supposed to give. The students did not get the vision of the possibilities of secondary agriculture. The courses lacked that something that would stimulate, that would motivate, that would organize and that would give direction.

At the same time that instructors in charge of teacher-training classes were groping around in search of better methods for their courses, supervisors and directors of secondary agriculture were searching diligently for some means of making agricultural instruction in secondary schools effective. Agriculture for the rural high school sounded practical and many schools introduced it with visions of saving the boys they had been losing and of rendering a genuine service to their communities. Instruction in agriculture in secondary schools was lifeless and all but meaningless until project teaching put life, interest and meaning into the work offered. The child found in his project definite problems to be solved and a goal toward which to work. The result or end desired became the conscious guiding purpose of all his efforts.

In the same way, if the student in a teacher-training course is to get the greatest possible good from his work he must

[1] Paper prepared for Department of Rural and Agricultural Education, National Education Association, Pittsburgh, 1918.

have some definite problem before him. This is as true of any other subject as it is of a course for training teachers of agriculture. If the student is to do his best thinking he must have a problem for solution. We all of us work hardest when we have a difficult problem to solve. So it is with the student. He organizes his thinking more completely when he has a problem for solution. The result which he is seeking "becomes a conscious aim, a guiding and inspiring purpose." He thinks with less waste when he has something central as a motive and guide. Problem-project teaching gives a realness and a concreteness to instruction that can be obtained in no other way.

Endeavor is more earnest and more persistent where interest is keen in the end desired. Interest is keener when there is a distinct need felt for the end sought. The problem, therefore, the need of whose solution is keenly felt stimulates thought to discover the best methods of dealing with the situation. Furthermore, the project that enlists the energy and resources of the student most is the project that he himself is working out. Dr. William H. Kilpatrick says it is not your project in which the student is most interested. It is his own project in which he is most interested and it is his own project that organizes his thinking. He will think more, and more carefully about it than about your project.

So we have come to look upon our teacher-training courses as projects—big projects made up of a series of problems. This series of related problems that make up the content of the courses, when solved and properly correlated and organized, comprise the working out of the project. The planning of a library for vocational agriculture in secondary schools is an example of one of the problems of the course. Instead of having the instructor give the class a stereotyped or perhaps a mimeographed lecture on the high-school agricultural library the student is given a problem to work out. Briefly, he is asked to select his library of books and give reasons for each book selected. He is asked to select a library of bulletins—bulletins that will be useful in his teaching and he is asked to catalogue them in that way that will make them most usable to his students. There are a number of factors to be considered in his choice of books and bulletins. He must have clearly in mind the scope of the work to be attempted and the emphasis to be placed on each phase of the work. He must know local conditions and the needs of the community the library is to serve. He must be able to evaluate a book in the light of the purpose it is to serve. He has something definite to work out—something that will be directly helpful in his work when he becomes a teacher of secondary agriculture. When the students under the direction of teacher, have decided upon the list of books that will be of most help and know why they will be most helpful; when they have learned how to select bulletins of most worth and catalogue them so as to make them most accessable, they will feel more than repaid for their work and will attack the next problem with enthusiasm and zeal. A problem of this kind stimulates interest and effort because of its practical bearing. Its solution insures better library materials, better methods and better library facilities in secondary vocational agricultural libraries, all of which are greatly needed.

Suppose, again, the problem for the class is equipping the agricultural laboratory. Incidentally, may I say that this problem needs a very great deal of serious thought. Too many teachers in ordering laboratory supplies have picked up a list of equipment and placed an order for the whole of it re-

gardless of the needs of the school. Supervisors have in some instances compelled school boards to buy a lot of expensive apparatus that was seldom if ever used. Some laboratories are so elaborately equipped that the tendency has been to make the instruction technical rather than vocational. A small amount of money wisely spent will provide a working equipment for vocational agricultural instruction in secondary schools.

Let us suppose, then, that the problem of the class in teacher-training is to properly equip the agricultural laboratory. The first problem will be to determine what will be incorporated in the course of study, and then buy equipment to fit the course as outlined. Too frequently the teacher plans instruction to fit his equipment, rather than equipment to make clear his instruction. Equipping the agricultural laboratory becomes relatively a simple matter when attacked from this viewpoint and again the student has something he can use in developing his work in secondary schools.

In the same way we might enumerate all the problems of the course and show how each gives definite help. But the problem-project method does more than give specific help. It develops self-assurance, initiative, the ability to do constructive thinking, the power to organize and the power to systematize. Every project is a life problem, and we get direction and power to handle other problems of life from having successfully worked out the preceding one. The project may be small or it may be large; the lesson from each should lead toward the same end; it should develop correct procedure in thinking and in working out similar problems; it should aid in developing clear notions of accuracy and scientific viewpoint; it should develop initiative; it should give self-direction; it should develop self-reliance, and lastly project teaching should motivate.

It is not difficult to see that project teaching in teacher-training courses must have careful planning. The student must know where he is going or there will be a tremendous amount of lost motion. Every problem of the course must be specific; it must be vitally related to the work the student expects to do as teacher and its working out must lead to a definite goal. Problem-project teaching must supply an aim and the plan of the project must show that the aim is directing the student's thinking. Problem-project teaching accomplishes its purpose when the results of the effort required for solving the problem "are of such positive and abiding interest as to arouse the person to a clearer recognition of purpose and to a more thoughtful consideration of means of accomplishment."

If I may digress a bit here, I should like to say that I believe project teaching in technical courses in agriculture is just as valuable as is project teaching in teacher-training courses. The best training the student could possibly get for developing his project work in secondary schools would be to carry out projects in vegetable gardening, field crops, animal husbandry or dairying while doing work in these subjects. This would be just as valuable for the student who is not preparing to teach as for the prospective teacher. For the student who has never had a great amount of farm experience this is especially desirable. These projects could be carried out under the joint supervision of the instructor in charge of the course and the instructor in farm management. The value of such teaching could hardly be estimated.

One agricultural college to my certain knowledge has used the project method of teaching in its vegetable gardening courses and has found it worked out splendidly.

College students have been said to be slow to take work that involves manual labor but the students of these courses attacked their problems with interest and enthusiasm. That the best method of secondary instruction in vocational agriculture is through the project is generally recognized. Any teacher will be decidedly better prepared to supervise and direct project teaching if he himself has been so taught.

To recapitulate them, I would say that the values of project teaching are:

1. Projects rightly directed develop initiative and originality.

2. The working out of a project develops self-reliance.

3. Projects properly carried out add content to other courses in the curriculum. (For example, planning materials for charts, lesson planning, etc.)

4. The working out of a project gives the student a correct method of procedure.

5. Lessons in thrift and economy may be taught through the project method.

6. The student is better able to remember the thing learned through a project because he sees the bearing.

7. By giving instruction an opportunity to function in actual practise projects make the teachers efforts more vital and more effective.

8. The project gives the teacher an excellent opportunity to study the pupil. It can often be made to serve as an effective pedagogical laboratory for measuring individual differences and for ascertaining where interests and capacities for learning lie. Altogether too often the student is allowed to remain in a course to the end of the term without the instructor having become familiar with the student's strength or weakness and a final examination is the test of what the student got from the course. Problem-project teaching enables the instructor to become intimately acquainted with the work of every student and enables him to give individual help wherever help is needed to every student in the course, however large his class may be.

Finally, the result that is most desired in all teaching according to Mr. Dewey is, "that the mind should be sensitive to problems and skilled in methods of attack and solution." The acid test of good teaching according to Kirkpatrick is "to leave the student with a desire to know more." I want to combine these two and say that the acid test of good teaching is (1) to leave the student with a desire to know more and (2) to enable him to sense problems quickly and attack and solve them in the most economical way. This the problem-project method of teaching attempts to do in teacher-training courses.

W. S. Taylor

The Pennsylvania State College

EDUCATIONAL EVENTS

SCHOOLS FOR MOTHERS IN ENGLAND

The British Board of Education has issued as a Parliamentary Paper [Cd. 9154] regulations under which grants to Schools for Mothers in England and Wales will be made by the board. The regulations come into force as from April 1 last, and in determining a grant the board will take into account expenditure incurred since April 1, 1917, on the provision of food for expectant and nursing mothers and for children under five years of age, where such provision is certified by the medical officer of the center or the medical officer of health to be necessary, and where the case is necessitous.

The regulations are as follows:

1. The Board of Education will make grants to schools for mothers during each financial year commencing on April 1, in respect of the provision made for promoting the care, training and physical welfare of infants and young children.

2. A school for mothers is primarily an educational institution, providing training and

instruction for the mother in the care and management of infants and little children. The imparting of such instruction may include: (*a*) Systematic classes; (*b*) home visiting; (*c*) infant consultations. The provision of specific medical and surgical advice and treatment (if any) should be only incidental.

3. The Board of Education will not pay grants under these regulations in respect of:

(*a*) institutions which do not as an integral part of their work provide collective instruction by means of systematic classes;

(*b*) "infant consultations" which are not provided for women attending a school for mothers;

(*c*) institutions or agencies provided by a sanitary authority or county council, or for which a sanitary authority or county council undertake entire financial responsibility;

(*d*) work of "home visiting" in connection with schools for mothers which is undertaken by sanitary authority or county council.

4. The grant payable in a financial year will be assessed on the basis of work done by the institution during the previous year.

5. Where, in the board's opinion, the provision made by the institution is adequate and its working is efficient, grant may be paid at the rate of one half of the approved expenditure. In other cases the board may either pay a lower rate or withhold the grant.

6. In fixing the rate of grant the board will take into consideration the scope, character and efficiency of the work of the institution. In this connection the board will have regard to the provision made for:

(*a*) coordinating the work of the institution with that of:

(i) similar institutions in the same district;

(ii) maternity centers and baby clinics or infant dispensaries providing medical and surgical advice and treatment for infants and little children;

(iii) the school medical service on the one hand and the sanitary authority on the other.

(*b*) keeping records of attendances at the institution and of visits paid to the homes.

7. (*a*) The institution must be conducted by a responsible body of managers, and a person must be appointed to act as correspondent on behalf of the managers.

(*b*) The institution must not be conducted for private profit or farmed out to any member of the staff.

8. Any institution desiring to apply for a grant under these regulations should forward to the Board of Education early in the financial year a statement in an approved form of the work done during the previous year.

9. The board may disregard any items of expenditure which, in their opinion, should not be taken into account for the purpose of the grant, and if any question arises as to the interpretation of these regulations the decision of the board shall be final.

THE FIFTIETH ANNIVERSARY OF CORNELL UNIVERSITY

OCTOBER 7 was the fiftieth anniversary of the opening of Cornell University. The *Cornell Alumni News* says:

Cornell University was a part of the aftermath of the Civil War. Early in that momentous struggle, just as to-day, the need of training in agriculture, on which rests the nation's supply of food, and in military science, on which rests national defence, became evident and resulted in the passage of the Morrill Land Grant Act of 1862. This resulted in the establishment of the great state universities and of Cornell University, which should have been a state institution, but which actually is neither that nor a private institution.

Cornellians will always be proud of the achievements of the founders and benefactors of the university. Ezra Cornell not only gave $670,000 from his own fortune, but also managed the university lands in such a way that they aggregated between five and six millions. With him, in the management of the lands, was associated Henry W. Sage, who also gave nearly a million and a quarter from his own purse. Andrew D. White not only gave over two hundred thousand dollars, but also de-

voted himself unstintingly to the task of organizing the faculty and curriculum, a task for which no one else was so well fitted. The number of other benefactors who have given greater or less sums is a large one.

The growth of the university has probably exceeded the wildest dreams of the founder. He was rash enough to say once that he expected that there would be five thousand students here. The maximum number thus far registered in any one year, that of 1915–16, was 7,143.

In the quality of work done here, too, it can be maintained without boasting, that the university has long ranked among the leading institutions of the world.

We should not ignore the fact, however, that some departments need to be strengthened, and that in others the bulk of the work is done by men who have thus far been characterized by promise rather than performance. This is no one person's fault; it is due to lack of funds, and to general conditions.

In another respect, too, there is room for development. The founder desired "an institution where any one can find instruction in any study." We need additional professorships, for example in Oriental literatures and history, in the Slavonic languages and literatures, in Celtic, in the fine arts, in business administration, in journalism. For one coming to Ithaca for the study of music there are excellent opportunities; it is a pity they can not be made available by the payment of a single fee.

At the threshold of a second half-century, Cornell alumni should resolve that at no distant date the founder's dream shall be made real.

PROGRAM OF THE HOME ECONOMICS ASSOCIATION

AT the eleventh annual meeting of the American Home Economics Association it was voted to work through the coming year, individually and collectively, in full cooperation with government agencies, to forward the following causes:

1. To establish and maintain instruction in the elements of home management, including the principles of nutrition, the proper choice and preparation of foods, thrift and economy in the use of clothing, fuel and other household essentials, to all girls in the higher elementary grades and in the high schools, at least in the first two years.

2. Inasmuch as the administration of the household is of common interest and importance to both men and women, and the maintenance of the individual away from home also demands an understanding of these matters, to urge appropriate instruction for boys as well as for girls, as far as practicable, in matters relative to the welfare and maintenance of the individual and of the home.

3. To promote the establishment of departments of home economics in normal schools and colleges, and of courses dealing with questions of public health, nutrition and thrift, open to all students, both men and women.

4. To cooperate in the extension of home economics instruction in the conservation of food, fuel, clothing and other household essentials to housewives desiring such assistance.

5. To further, individually and collectively, the campaign for child welfare through the establishment of courses of instruction in child care and child welfare in schools and colleges, and through active cooperation with the Children's Bureau.

6. To aid all community enterprises which extend the ideals of home economics or promote the improvement and maintenance of health.

7. To support and maintain the *Journal of Home Economics* as a means of extending knowledge of the subject and of promoting thought and discussion.

8. To promote research by encouraging and aiding investigations and research in universities, and by meetings local and national, in order that knowledge may be increased, and public opinion informed, and advancement made secure by legislative enactment.

9. To give active support to all legislation, state and federal, which aims to secure any of the ends which we are working to promote.

10. For the above purposes to rally all the members of the national association; to stimulate local and state associations to increased endeavor in these directions; and to ask for the cooperation of other existing volunteer agencies now engaged in related movements such as the Federation of Women's Clubs, the Red Cross, Social Service Organizations, Public Health Nursing Associations.

TEACHERS AND THE DRAFT

THE Commissioner of Education has sent to superintendents and principals of schools the following letter covering the cases of teachers registered under the new selective service draft act:

The extension of the selective draft ages, by recent act of Congress, renders many school officers

and teachers liable to call for military service. It is not the intention of the government, however, to call to the colors men whose services are necessary to the carrying on of the country's educational enterprise. The Provost Marshal General is instructing local and district boards to give deferred classification to men who are essential to the operation of educational institutions. Industrial advisers have been appointed to assist district boards in determining the validity of claims for deferred classification or exemption in order that fundamental undertakings, including education, may not be unduly disrupted. It is, of course, understood that persons not essential to the continuance of these undertakings will not be given deferred classification on the ground of occupation.

I advise you to scrutinize with special care the teaching personnel of the school or schools under your charge with a view of determining which men teachers, superintendents or supervisors are indispensable. In this connection you should consider the possibility of reorganizing your staff and also the possibility of replacing men of military age by others not within the limits of the selective draft or by women. The attention of such teachers as you decide are actually essential to the carrying forward of the schools should be called to the substance of the inclosed documents in order that they may claim deferred classification when they fill out their questionnaires. In addition, the head of each school should make certain that the industrial adviser of the district board is fully informed with respect to the cases of all these teachers when their cases come before the board for decision.

THE SALARIES OF NEW YORK CITY TEACHERS

THE Association of Men Teachers and Principals, met at Terrace Garden on October 12, for the purpose of discussing ways and means whereby the salaries of the teaching body might be increased equitably. According to the report in *School* the meeting was well attended, and the prevailing spirit of harmony and accord showed that the men have set themselves to the task of salary revision with an earnestness which presages a successful campaign. The purpose of the meeting as set forth by Edward Mandel, who acted as chairman, were (1) to bring the men together for open discussion of the salary situation, and (2) to reach some definite basis for salary revision, which basis would appeal to all members of the teaching body. Although the task of amalgamating the interests of the many groups of teachers is a most important one, it is not an impossible one, and the association pledges itself to work for the passage of any measure which will appeal to a majority of the teachers.

The important points emphasized by the speakers, many of whom addressed the meeting as guests of the association, were the following: 1. The entire teaching body must act as a unit,—there must be but one line of activity,—else nothing can be accomplished. A divided campaign in this work spells defeat. 2. Anything that will cause friction must be avoided. A common basis of salary increase must be agreed upon beforehand, and such a basis having been agreed upon, individual groups of teachers must abide by the rule of the majority, and work for the common cause. 3. Men teachers must be kept in the elementary schools, and must receive a living wage. 4. Favorable sentiment in favor of the raising of teachers' salaries must be created by means of an educational campaign, conducted systematically through the public press. 5. Elementary and high school principals and teachers must work together for the common cause. 6. Every one—superintendent, principal, supervisor and teacher—must lend a shoulder to the wheel.

At the close of the meeting, President Mandel was authorized to appoint a committee of men, such committee to make an intensive study of the question of salary revision and report back to the association in two weeks. It was understood that in the appointment of such committee, the president should not be limited to members of the association, but should be empowered to appoint to the committee such men as had shown an aptitude for committee work, whether such men were members of the association or not. Mr. Mandel will announce his appointments in the near future. Henry Hein, principal of P. S. 40, Bronx, was appointed chairman of the Publicity Committee.

Among those who addressed the meeting were the following: Clyde R. Jeffords, Jacob

Theobald, Ernest D. Daniels, Henry Hein, Alfred C. Bryan, Hugh C. Laughlin, Ambrose Cort, Rufus A. Vance, Frank E. Harding, Charles W. Rozelle, Abraham Lefkowitz, William McAuliffe, Jacob Friedman, Giles J. Swan, Fred. J. Mason, James H. McDonald and John Burke.

UNIVERSITY AND EDUCATIONAL NEWS

DR. LOTUS D. COFFMAN, dean of the school of education of the State University of Minnesota, has been appointed head of the work by the War Department on the reconstruction of crippled and injured soldiers, succeeding Dean James E. Russell, of Teachers College, Columbia University.

PRESIDENT W. F. PIERCE, of Kenyon College, has recently returned from the western front in France, where he was sent by the American Red Cross.

DR. F. M. FOSTER, who for the past six years has been assistant professor of Latin in the University of Iowa, has severed his connection with the university, and will proceed to France as overseas educational secretary for the Y. M. C. A. After his return from France he will enter on the teaching of education.

PROFESSOR FREDERIC S. LEE, of Columbia University, has been sent to England and France on a special mission by the United States Public Health Service.

DR. LORANDE L. WOODRUFF, professor of biology in Yale University, is serving as consulting physiologist in the Chemical Warfare Service, N. A.

AT the Kansas State Agricultural College Francis D. Farrell has been appointed dean of agriculture and director of the agricultural experiment station, succeeding Dr. William M. Jardine, now president of the college. Dr. Helen Bishop Thompson has been appointed dean of home economics and professor of nutrition. She succeeds Mrs. Mary Pierce Van Zile, who is devoting her attention exclusively to the office of dean of women.

PROFESSOR O. S. PLUMB, of Ohio State University, college of agriculture, has consented to withdraw his resignation and to continue his services as head of the department of animal husbandry. Professor Plumb had expected to retire from teaching and to give his entire time to writing on animal husbandry subjects but arrangements have been made whereby he may do this work and yet continue teaching.

DR. WITHROW MORSE has been appointed professor of physiological chemistry in the medical school of the University of West Virginia, Morgantown.

H. FOSTER JONES has resigned his chair of English in Huron College to accept a lectureship in English at the University of North Dakota.

SUPERINTENDENT J. H. FRANCIS, of Columbus, in charge of the school garden work since March, has had his leave of absence from Columbus extended from October 1 to July 1, 1919, and will remain in Washington.

SUPERINTENDENT WILLIAM DAVENPORT, of Park River, North Dakota, has been elected superintendent of schools in Medford, Oregon. He is succeeded at Park River by Leonard A. Moe.

MR. C. B. GREEN, for a number of years principal of Boydton high school, has succeeded Mr. F. C. Bedinger as superintendent of Mecklenburg county, Va.

FRANK L. GLYNN, state director of vocational education for Wisconsin, has resigned to become director of vocational training in the United States Aeroplane Works, Buffalo, N. Y. He is succeeded by John Callahan, of Menasha.

JESSE F. KOLB, instructor in the high school at Salt Lake City, has been promoted to the position of director of vocational education for the city.

PROFESSOR JAMES H. WOODS, Harvard exchange professor in Paris, has been in various civilian positions under the French Foreign Office, Paris, 1916–18, and has now returned to Cambridge.

THE newly appointed professor of Italian in London University, Dr. Antonio Cippico, delivered an inaugural public lecture on "Machiavelli and Mazzini" at University Col-

lege on October 7. In addition to the professor, the staff of the department of Italian at University College will consist of the reader, Dr. Edmund Gardner, who is also Barlow lecturer on Dante, and the assistant, Dr. Beatrice Giglioli. The program includes six public lectures by the reader on "Italian civilization in the early middle ages," and twelve Barlow public lectures on the "Purgatorio."

THE following have been named as a committee on organization for the American Classical League, an outgrowth of the classical conference held at Pittsburgh in connection with the annual meeting of the National Education Association; Principal Stearns, Phillips-Andover Academy, Andover, Mass.; Professor C. H. Moore, Harvard University, Cambridge, Mass.; Miss Anna P. MacVay, Wadleigh High School, New York City; Dean Andrew F. West, chairman, Princeton University, Princeton, N. J.; Professor W. L. Carr, University of Chicago High School, Chicago, Ill.; Miss Frances E. Sabin, University of Wisconsin, Madison, Wis.; Miss Susan Paxson, Central High School, Omaha, Nebr.; Professor H. C. Nutting, University of California, Berkeley, Cal.; Dean H. C. Tolman, Vanderbilt University, Nashville, Tenn.

PROFESSOR BRISTOW ADAMS, of Cornell University, was elected president of the Association of College Editors, at its sixth annual meeting held in Knoxville, Tenn.

THE New York Schoolmasters Club celebrated at its October dinner at the Aldine Club by entertaining the Educational Mission from Great Britain and endorsing the appeal of President George D. Strayer, of the National Education Association for the establishment of the Department of Education.

THE Schoolmasters' Association of New York and its vicinity held the first meeting of the year at the Columbia University Club on October 25. The principal speakers, according to the program, were: Superintendent William L. Ettinger, Professor David Snedden, of Teachers College, and Dr. Edwin E. Slosson, literary editor of the *Independent*.

KNOX COLLEGE opened this fall under its new president, Dr. James L. McConaughy, formerly professor of education and director of the summer session at Dartmouth College, with the largest registration in its history, 500. Miss Dorothy Hudson of the University of Minnesota has been appointed to take the place of Miss Helen Painter, of the English department, who has been given a year's leave of absence to do Y. M. C. A. canteen work in France. Miss Florence Willard and Mrs. Ray Arnold of Knox and Miss Fannie Malone of Drake University, have been added to the French department. Mrs. Abraham Powelson, also a Knox graduate, is to take charge of the dramatic and interpretative courses in public speaking. Mrs. Fred Middlebush, of Oberlin College, has filled the vacancy in the department of physical education for women.

JUSTICE PHILBIN in the Appellate Division of Kings County has handed down a decision denying the petition of Miss Mary McDowell for reinstatement in the public school system as a teacher. Miss McDowell is a Quakeress who taught in the Manual Training High School and was dismissed by the Board of Education for "conduct unbecoming a teacher." In his decision Justice Philbin said: "She says that her offense, if any, was to disclose the state of her mind, her beliefs and that there is no element of behavior or conduct in a mere belief. Her answers to the questions propounded to her may be summarized as follows: She would not uphold this country in forcibly resisting invasion; she did not want to help the government of the United States in carrying on the present war; she would not urge her pupils to support the war; she would not urge them to perform those Red Cross services which better the condition of the soldiers in the field; she would not urge her pupils to buy Thrift Stamps; she does not believe a teacher is under a special obligation to train her pupils to support the government of the United States in its measures for carrying on the war, and she is opposed to the present war against the German government. The contention that the petitioner, in spite of her views, may still be able to do her full duty as a teacher in the classroom can not be upheld."

AFTER announcing that in writing his "Orgy of Hate," a letter to *The Public*

Ledger, which criticized the patriotic war spirit of the nation, he stood on the same ground with President Wilson, Professor Henry Joel Cadbury, of Haverford College, was absolved from any charge of unpatriotism by United States District Attorney Kane on October 17. The district attorney said he was convinced of the loyalty of Professor Cadbury. A long conference was held in the office of the district attorney, after which Professor Cadbury said: "I feel deep regret that my letter was of such a form as to be construed as an attack on either the Administration or the whole people of the United States. I had no such intention, nor did I intend to condone the deeds of Germany. My only purpose was to protest, as President Wilson has repeatedly done, against the expression of unreasoning hate on the part of any of my countrymen."

ON the recommendation of Superintendent Ettinger the New York City Board of Education has voted that the by-laws prohibiting the employment of married teachers shall be held in abeyance during the war.

THE Board of Education of New York City has approved the report of Mrs. Annie M. Murray on the need and desirability of public school lunches, which carries with it a recommendation to include $50,000 in the 1919 budget for establishing experimental lunch centers.

THE Philadelphia Board of Education has adopted a rule providing that teachers who leave the schools to enter government work shall lose their places. In case they return to teaching their names will be placed at the end of the eligible lists and appointment made in the order of registration.

THE Massachusetts State Board of Education has planned an evening class at the Lowell Industrial School for the purpose of training mechanics to become instructors.

The Manual Training Magazine states that a school for training camuofleurs has been established by the shipping Board, under the direction of William A. Makay. Students applying for this branch of service are required to have a good elementary knowledge of line and color, and light and shade; therefore professional artists and scene painters are given the preference.

MR. FREDERICK W. VANDERBILT has enabled Yale University to acquire the property on the Sheff-Vanderbilt square at the corner of Grove and Temple Streets known as the Trowbridge place and of historic interest as the residence of Noah Webster of dictionary fame, which has been bought and given to the Board of Trustees of the Sheffield Scientific School. The purchase leaves only two pieces of property on this Sheff square not owned by Yale,—the New Haven Historical Society and one of the houses in the brick block facing the School on Grove Street.

THE total enrollment of the University of Porto Rico is more than 400 students, nearly 170 of whom were of college rank, having completed a full four years of high school before beginning the work in the university. The normal school, by far the largest department of the university, with a complete enrollment of 205 students, has 63 high-school graduates beginning the two years' teaching course. Up to this year the largest number to enter the department with high-school diploma was 35.

THE Students Army Training Corps at the University of Chicago is limited to 1,500 students, of whom 200 may be members of the Naval Unit. Up to October 1, 1,745 applications had been received for enrollment in this service. Of this number 1,100 have already been examined. Of the total number of applicants, 523 are former students of the university and 1,222 are new students. Barracks are being built in the concrete grandstand on Stagg Field, which will accommodate about five hundred men. The remaining soldiers of the unit will be housed in the former men's dormitories and possibly in adjacent fraternity houses. Major Henry S. Wygant is commanding officer of this unit. He will be assisted in the training of the men by ten or twelve lieutenants.

THE prudential committee of the Yale Corporation has granted leaves of absence as fol-

lows: Professor Clive Day, first semester, government work; Professor Josiah Morris Slemons, duration of war, to enter the Medical Corps; Professor Charles Seymour, work in the inquiry in connection with the State Department; Professor Frederick B. Luquiens, to accept a captain's commission in the Intelligence Department; Professor Austin M. Harmon, to continue as junior lieutenant in the Naval Reserve; Professor Charles M. Bakewell, historian of the Red Cross in Italy, with rank of major; Assistant Professor Ralph G. Van Name, qualified chemist in government service; Professor Chauncey B. Tinker, special work for the Red Cross; Professor Ernest Fox Nichols, continuance of leave of absence for present university year, service in the Ordnance Department; Professor Thomas Sewall Adams, continuance of leave of absence for present university year, service in the Treasury Department; Professor James F. McClelland, continued service in the Bureau of Aircraft Production; Professor Clarence W. Mendell, commission in the Intelligence Service; Professor Ralph C. Bryan, war service with the United States government in connection with the lumber industry; Professor John C. Tracy, continued service as director of the New Haven War Bureau.

THE State Normal School at Harrisonburg, Va., Julian A. Burruss, president, has been selected by the Federal Board for Vocational Education at Washington as one of the Virginia normal schools to participate in the fund appropriated by Congress for the training of teachers in home economics under the provisions of the Smith-Hughes Act; and this year thirty-seven students are registered for the first year of the course, which includes four years of work of strictly college grade. This school also offers a two-year course in home economics for teachers of elementary schools; and gives to all students taking the preparatory year, equivalent to the fourth year of high school, a general course in foods, shelter and clothing. Miss S. Frances Sale has charge of this department, assisted by five other instructors and five assistants who are graduate students completing the B.S. course. Members of the senior class live in the practise house twelve weeks each, and are required to do practise teaching for twenty-four weeks in the schools of the city and the surrounding country, for which the county appropriates the traveling expenses and the normal school furnishes an automobile.

DISCUSSION AND CORRESPONDENCE

SCHOOL GARDENS[1]

BEFORE lending our support to a new educational movement the question of its value most naturally arises. If the garden work is no more valuable than some of the educational fads then it is a waste of effort and money. If, however, we can give the children something real, something beyond a mere return in produce or an increased appreciation of nature (important though these may be) which it is difficult to give in any other easily available way, then we are justified in exerting ourselves to the utmost in the cause. Because garden supervisors not infrequently find it necessary to make a "good showing" for directors or visitors whose appreciation of symmetry in gardens considerably outbalances their knowledge of pedagogical principle, I fear that the best results are not always obtained. This condition led to the preparation of this paper.

It has always seemed to me that there are two methods of conducting children's gardens. The first method considers the cultivation of a large plot beautifully laid out, while in the second the garden work is planned for the development and benefit of the individual child. When we enter a garden arranged on the first plan we feel at once that no child's brain conceived the landscape effects and that children's hands did but little of the work. It is delightful to have such a garden for show purposes and to prove to those financing the operations the instructor's skill and gardening ability. But one experienced in the

[1] Read before the Parent-Teachers' Association of Lancaster, Pa., in March, 1918.

work, however, upon entrance into such a garden can not refrain from smiling or questioning as to the number of paid gardeners on the staff.

No course in science to-day is considered complete without laboratory work and indeed we are gradually getting to recognize that the lectures must be a secondary consideration. In some universities the lectures are grouped about the laboratory work and are not commenced until certain information has been obtained through personal investigation. Unfortunately here also we find two methods of procedure. In many laboratories little work is left to the initiative of the student. He is given an object to dissect. The difficult manipulations are performed for him and he is told what he sees. Naturally desiring to stand well in the favor of his mentor, he notes what he is told to see and observes nothing else. The joy of discovery is not his, the observations were those of another. The student has probably gained a few names but little else. His confidence in his own ability has not been strengthened and his initiative is undermined. In the other type of laboratory the student is allowed to blunder along with but a few necessary directions or suggestions here and there until a light dawns and he has worked out his salvation "single handed and alone." His period of hopelessness is replaced with confidence and his weeks of practise have fitted him to cope with new problems as they arise.

So it is with school gardens. We can not serve two masters. Either we must specialize on the garden or our chief concern must be the children. If we produce a thoroughly planned and typically adult garden we rob our youthful toilers of the soil of their birthright to think for themselves and lose, what is to me, the greatest benefit of the garden work. The school garden takes the place in the lower grades of the laboratory work in the high schools and colleges. The garden gives the children a chance to work with their hands and to see things develop under their care. Manual labor properly guided must eventually lead to constructive imagination, since the results are concrete rather than abstract and consequently more clearly understood. It would be obviously incorrect to claim that gardening alone affords these desirable opportunities for the possibilities of manual training under competent instructors will at once occur to the reader. It can, however, be said in favor of gardening that the work is almost entirely out of doors. I see no necessity of choosing between the two fields of instruction since both are valuable and the more chance for individual work where the fruits and results of the labor are definite the better will be the training of the child.

The garden under the system I shall describe will at first be far from beautiful and the second and third year may not be good, but if relatively the same children are engaged in the work I think it safe to say that the second year will be better than the first and the third will show still greater improvement. Of this I shall speak later.

When I was associated with the garden movement in Cincinnati there were two types of gardens to be considered, the home and the school or community garden. The idea, of course, behind the home gardens was to encourage and to make necessary the cleaning up of back yards. In this I think that we were as successful as could be expected and improvement was obvious from year to year. As the influence spreads and the interest increases better and better results should be obtained. Many homes, of course, had no yard and plants were then raised in pots and cans or boxes on the windowledge roof or fire escape. Many of these were highly successful and added a touch of the outdoors to an otherwise dingy tenement.

In the spring seeds were sold at the schools at a nominal cost and records of the purchasers were kept. During the summer the homes of the children were visited at least once and notes were taken as to the disposal of the seeds. Several prizes were offered in each district and photographs were taken of all good gardens thus stimulating additional neatness and industry. Talks on gardening were given at the various schools and lantern slides

were exhibited of the prize gardens of the last summer to the glorification of the gardeners who, very likely, were in the audience.

The community gardens were either connected with a school or an institution or located in some vacant lot or in one of the city parks. Work was started in April or May. Each child was given as large a plot of ground as possible and then allowed to select from a list any kind of seeds he or she desired. It seems almost unnecessary to point out that the seeds must be of a variety that grows rapidly for youthful patience is not sufficiently strong to suffer a very long wait between germination and maturity. Certain necessary precautions and directions were given and the gardeners were turned loose.

As any who have tried it know discipline within four walls and in the open are two entirely different problems. Of course to maintain the rigid order of the class room would be absurd and if attempted the garden would soon be minus the gardeners. Some regulations however, are necessary to keep the system running smoothly. The easiest and most successful method is to appoint certain of the children as supervisors of a given number of plots with the duty of maintaining peace in their sections and seeing that all the tools are properly replaced. Frequently the most unruly are the most successful when given this responsibility.

When the planting is over and until the seeds begin to send up their shoots and during the period of early growth interest will remain high. During the early summer when there is little garden work to do there will be a drop in the attendance unless an effort is made to keep the children interested. Games, walks and trips to points of interest seem to furnish the necessary stimulus to attendance and aid in holding the children through the summer. Small prizes are offered for the best cared for gardens and the work is brought to a close in September or October.

For the teacher the school garden offers much that is interesting and pleasant. The work though arduous at times is at least out of doors and invigorating. The visits to the homes, especially in the poorer districts, establishes a contact between school and parent which I feel is very valuable. That the parents appreciate the visits is evidenced by their cordiality and interest and they avail themselves of the opportunity by asking advice on many subjects besides gardening. Personally, I much prefer to visit the poorer homes as I have frequently felt like an intruder in the more prosperous districts and usually have not been so well received. Though I believe that gardening offers valuable training for all, if financial conditions make it necessary to select the neighborhoods in which to start gardens, I should suggest that the poorer sections be favored.

From what has been said you have probably gathered that I consider the garden as a means to an end rather than the end in itself. The opportunity the gardens offers, if operated on the proper principles, for the development of the initiative and individuality of the child is, to me, of far greater importance than the few beans or radishes he or she may raise. And I should like to reiterate in conclusion that the garden which is planned and in which the work of upkeep is more or less performed for the children is a failure from the beginning and regardless of its possible beauty its power of producing the desired results is destroyed.

ROBERT T. HANCE
ZOOLOGICAL LABORATORY,
UNIVERSITY OF PENNSYLVANIA

QUOTATIONS

MILITARISM IN SCHOOLS

PACIFISTS often use the word "militarism" without knowing exactly what is meant by it. To them any kind of drilling is "militarism in schools," just as any kind of ritual is Popery to the fanatical Protestant. But pacifists are not the only people who use the word loosely. There are others, not pacifists, who talk about Prussian militarism, and mean by it merely the power of the enemy. It is not militarism that they dislike, but the German Army. If, by the same methods, we can make an army to defeat it they will be

well pleased. But that is by the way; we are now concerned with the pacifist and his use of the word. He seems to believe that in our schools we ought to conceal the fact that there is a war or that there ever have been wars; above all, that it is ever necessary for men to fight for their country, or to train themselves for doing so. To him the training is evil in itself, is a kind of indecency that children ought to know nothing about. He thinks that the mere handling of a rifle will make them bloodthirsty, that obedience to the word of command will turn them all into slaves. He forgets that most of the free peoples of the past have preserved their freedom by some kind of national service. He forgets the Athenians, who would never have beaten the Persians if they had not been used to arms; the Italian Republics, the Swiss, the Netherlanders—in fact, all the brave little peoples who have made the civilization of Europe by being willing, and trained to fight for it. Knowing that war is a great evil, he would ignore it with a prudery that in sexual matters he is the first to deride. To him not to ignore it is militarism.

But militarism is something quite different from military training, as any Athenian could have told him. The Athenians failed in the Peloponnesian War because, not being militarist in their whole way of life, they adopted a militarist policy. They attempted conquest without having turned themselves into a conquering machine. A militarist nation is one that has turned itself into a conquering machine, one in which all civil activities are subordinate to military, and peace is merely a preparation for war. Military training may be a part of education without being considered the chief part of it; nor is it inevitable that boys who learn the elements of soldiering should wish, above all things, to prove their training in war. The notion that those who are taught how to fight must at once be eager to do so is not confirmed by experience. The French people have been trained in arms for many years, yet they had no desire to fight; peace to them was not a preparation for war. They differed from the Germans, not in the absence of military training, but in their teaching of history and their idea of their own destiny. The Germans are militarist, not because they have conscription, but because they have been taught to believe that war is the most glorious of human activities and one in which they must always be victorious because to them the soldier is the greatest of men and the natural ruler of mankind. The chief of the French people is not incessantly changing from one uniform to another: he behaves and dresses not like a soldier, but like a civilian; nor do French officers walk the streets as if they were doing an honor to the pavement by treading upon it. In Germany the civilian, if he is not a conscious rebel, feels himself inferior to the officer. He is occupied with a less important business, no matter what that business may be, even with a less holy business. It is the sense of the holiness of war, and everything concerned with it, that makes a nation militarist.

We have a kind of militarism in our public schools, the militarism not of war, but of games. The boy who is not an athlete does often feel himself inferior to the boy who is. Games are considered a more holy business than work; there is a religion of games, but not of work. There ought, of course, to be a religion of neither, but a religion above both. It is strange, however, that our pacifists, in their hatred and fear of militarism, should not see where the real militarism of our public schools, the real perversion of their religion, lies. They have wrong values, but they are for the athlete, not for the soldier. They do believe in force, but it is the force exercised on the playingfield, not on the field of battle. They set the body above the soul, not so that they may conquer the world, but only so that they may win the House cup. And this militarism in play is exactly what the German, with his militarism in earnest, most despises in us. We at least do play games for their own sake; the German plays them because he thinks they may make a better soldier of him. He is taught to see all things in terms of soldering; whereas our boys learn, if they are

not taught, to see all things in terms of games. There is nothing that irritates the Germans so much as our phrase "Play the game." To him it seems a kind of blasphemy when applied to the holy business of war; but we try to make war tolerable by seeing it as a game. No! We may be frivolous in our athleticism, but we are not militarist. We shall become militarist only if we are taught in our schools that we are the chosen people and that our chief duty is to prepare ourselves all our lives to seize that which we have been chosen to enjoy. But even then it is likely that the English boy will rebel against the teaching. He is submissive only where games are concerned. At present the problem is to induce him to take anything else seriously.—*The Times Educational Supplement.*

EDUCATIONAL PROGRAM OF THE AMERICAN FEDERATION OF LABOR

AT the St. Paul meeting the federation adopted the following program:

1. The development of vocational guidance and industrial education in both urban and rural communities, in proper relation to each other and to the needs of our democracy.

2. The provision of increased facilities in public normal schools for men and women in the trades who desire to prepare themselves for teaching industrial and vocational subjects; and the expansion of both state and federal educational facilities, so that we will be decreasingly dependent on private endowments in the educational field. In this connection we call your attention to the movement in one state to introduce into the state university in cooperation with the state federation of labor a course designed to prepare young men and women of labor for intelligent and effective leadership in the labor movement.

3. The insistence that in all courses of study, and particularly in industrial and vocational courses, the privileges and obligations of intelligent citizenship must be taught vigorously and effectively; and that at least in all vocational and industrial courses, an unemasculated industrial history must be taught, which shall include an accurate account of the organization of the workers and of the results thereof, and shall also include a summary of all legislation, both state and federal, affecting the industries taught.

4. The provision of adequate facilities for the teaching of English to non-English speaking people, and the utilization for this purpose of the foreign language press.

5. The requirement that all our children shall be taught in the English language, in both public and private schools, a foreign language to be taught only as a subject in the curriculum.

6. The provision of ample playground facilities as a part of the public school system.

7. Continuous medical and dental inspection throughout the schools.

8. The organization and equipment of special classes for children who are subnormal, either mentally or physically; and also special classes for children who are found capable of making more rapid progress than is possible in a standard school.

9. Better enforcement of compulsory educational laws, and the universal establishment of a minimum school-leaving age of sixteen years.

10. The establishment of complete systems of modern physical education.

11. The establishment of a federal department of education, headed by a cabinet officer.

12. The wider use of the school plant, securing increased returns to the community through additional civic, social and educational services to both adults and children.

13. The extension of a free text-book system to the District of Columbia and such states and communities as have not adopted it.

14. The establishment of self-governing school and district councils of teaching for the purpose of utilizing the experience and initiative of the teaching body in the conduct of the schools, the recommendation of such councils to be made a matter of official public record.

15. The securing for teachers of tenure of position during efficiency. There should be no dismissals without full and fair hearings.

16. A thoroughgoing revision upward of teachers' salary schedules, to meet the increased cost of living, and the growing appreciation of the value to the community and the nation of the teachers' services.

17. The liberal, ungrudging reorganization and increase of school revenues on a war-emergency scale, as the only basis upon which to secure the expansion of our schools along these lines. England and France, with their resources strained by the past four years, and facing unprecedented immediate demands, are making huge increases in the appropriations for their schools. Surely the

people who gave the world the conception of free, democratic education must not longer loiter behind.

The following resolutions, offered by Charles B. Stillman, of the American Federation of Teachers, were adopted:

WHEREAS, we now have no genuinely national educational system, but merely a collection of state systems, varying widely in standards and effectiveness; and

WHEREAS, the existing Bureau of Education under the Department of the Interior has been so starved financially that it has been unable to perform adequately even the very restricted functions permitted it; and

WHEREAS, war conditions are arousing the public to a consciousness of the need for a national educational policy to secure coordination among the states, and to promote national welfare, efficiency and unity; and

WHEREAS, education is essential to our national life, and is so intimately connected with all matters of public policy that with labor and agriculture it should be directly represented in the deliberations of the President's cabinet: Therefore be it

Resolved, that the president and executive council of the American Federation of Labor be instructed by this convention to take measures to secure the creation of a Federal Department of Education headed by a cabinet officer.

Resolved, that the president and executive council of the American Federation of Labor be instructed by this convention to urge all state and local central bodies to take early measures to secure in their respective states and localities a thoroughgoing reorganization and increase of school revenues on a war-emergency scale, and a liberal revision upward of teachers' salary schedules to meet the increased cost of living and the growing appreciation of the value to the community and to the nation of the teachers' service; and be it further

Resolved, that the president and executive council of the American Federation of Labor be instructed by this convention to initiate and support federal legislation appropriating one hundred million dollars to be apportioned by a federal department of education, if one is created, or that failing by a federal board upon which organized labor and education shall be represented, such fund to apply only to the payment of salaries of public-school teachers in a state (including teachers of physical education and of English to adults under public-school supervision), after such state shall have satisfied the federal department or special board that adequate standards are to be maintained and shall have appropriated an equal amount.

SPECIAL ARTICLES

THE USE OF INTELLIGENCE TESTS IN THE EDUCATIONAL GUIDANCE OF HIGH SCHOOL PUPILS. II

III. SCHOOL MARKS CORRELATED WITH TEACHERS ESTIMATES

By referring to Table I., it will be seen that there is one pupil with an I. Q. of 134, who is rated by his teachers in the group 2.75–2.99, and another with an I. Q. of 130, who is rated in group 3.00–3.24 in intelligence. It was found by comparing the ratings of intelligence given to these two pupils by their teachers with the marks received during the semester in which the ratings were made, that the marks and the ratings corresponded exactly, *i. e.*, a teacher who had given one of these pupils a mark of "B" in a subject ranked him "2" in intelligence, or if he had earned a "D" he received a rating of "4" at the hands of the teacher of that subject. The extent to which this method of rating intelligence was employed by the teachers is shown by Table II.

There is not a single instance of a pupil rated by his teachers as being below the median in intelligence and at the same time receiving from them marks above the median. The most extreme variation contrary to expectation is that of a pupil rated at 2.00 in intelligence and receiving school marks averaging 70 per cent. This was of a boy with an I. Q. of 113, who was recognized as "bright" by his teachers, but who was at the same time very indifferent and lazy. The other five cases, rated as above the median in teachers' estimates but receiving marks below the median, were of pupils rated as average, "3," by a majority of their teachers, but as very superior, "1," or superior, "2" by a single teacher, thus bringing their final rating above average. There are no cases in the groups 1.00–1.24 to 1.75–1.95 inclusive, which receive school marks below 80 per cent.

TABLE II

School Marks Correlated with Estimates of Intelligence of 102 High-school Pupils

Teachers' Estimates. Ratings 1–5	Marks of Pupils, Grouped by Steps of Five									Totals	Total by Groups
	50–54	55–59	60–64	65–69	70–74	75–79	80–84	85–89	90–94	95–99	
1.00–1.24								1		1	
1.25–1.49							3	2		5	
1.50–1.74							1			1	
1.75–1.99						2	1			3	10
2.00–2.24					1	1	3	7		12	
2.25–2.49					1	3	2	1	1	8	
2.50–2.74					1	3		1		5	
2.75–2.99					3	3	2			8	33
3.00–3.24		1	2	1	12	10	2			28	
3.25–3.49				7	2	5				14	
3.50–3.74				2	2	4				8	
3.75–3.99				1	2					3	53
4.00–4.24				1	1					2	
4.25–4.49										0	
4.50–4.74		1	1	1	1					4	
4.75–4.99										0	6
5.00–5.99										0	0
Totals by I. Q.		2	3	13	26	29	11	14	4	102	
Total steps of 10		2		16		55		25	4		102

Median school mark falls in group 75–79.

Median Teachers' Estimate of Intelligence in group 3.00 to 3.24.

Correlation, using Pearsons formula, + .702.

Probable error: .0518.

Semi-inter-quartile range: Teachers' Estimates, .45; School marks 5 per cent.

The significance of this high positive correlation (+ .702), between teachers' estimates of intelligence and the marks which they give to their pupils, is that teachers base their estimates of intelligence primarily upon the success of the pupils in their school work. In order to arrive at anything like an accurate judgment of the intelligence of the pupils making up a given class the teacher needs to have them under his charge for a considerable length of time before he is able to venture an estimate. The teacher's estimate of a given pupil's intelligence is quite likely to be influenced by factors that have nothing to do with intelligence, such as dress, bearing toward teacher, good looks, glibness, etc. Standard mental tests on the other hand register an impersonal and unbiased judgment concerning the intelligence of the person tested, and do so in a comparatively short time.

The correlation between the ratings of intelligence made by the English teacher and those made by the algebra teacher was + .730; between the ratings given by the algebra teacher and the principal of the intermediate school, the correlation was + .643; between those by English teacher and the principal of the intermediate school + .658. The average of the correlations of estimates of intelligence made by these three teachers, each of whom had nearly all of the pupils tested in his or her classes, was + .677. The estimates of the teachers were consistently made, and based primarily upon success in school work.

IV. THE RELATION BETWEEN INTELLIGENCE QUOTIENT AND SCHOOL SUCCESS

Pupils in the Palo Alto High School are graded by the use of the letters A, B, C, D and E, "D" being a condition and "E" a failure. In order to average the grades thus given for correlation purposes absolute numer-

TABLE III

Correlation of the Intelligence Quotients of 102 High-school Pupils with their School Marks

I. Q.	School Marks, Grouped by Steps of Five								Totals	Totals by Groups, I.Q.
	55–59	60–64	65–69	70–74	75–79	80–84	85–89	90–94		
135–139							1		1	
130–134					3		1		4	5
125–129				1	2	1	1	2	7	
120–124					4	2	3		9	16
115–119				2	2	3	2	1	10	
110–114				7	1		4		12	22
105–109 (Median)		1	3	2	3	1	2		12	
100–104			4	4	1	2	1		12	24
95– 99			2	5	8	1			16	
90– 94		1	3	4	3	1			12	28
85– 89	1	1		1	2				5	
80– 84	1		1						2	7
Totals, Mks.	2	3	13	26	29	11	14	4	102	
Totals by 10s	2		16		55		25	4		102

Median I. Q. 105–109.

Median Mark 75–79.

Semi-interquartile range, for I. Q.'s 10½; for Marks, 5 per cent.

Correlation, using Pearson's formula + .545.

P. E. for correlation .0685.

ical values were assigned to the letters. All the marks given to 9A and 9B pupils for the school year 1916–17 were thus treated, but no case was made use of in the correlation array unless at least four marks had been received.

The number of minus *xy* cases is greater in this correlation array than in the one where I. Q.'s were correlated with teachers' estimates of intelligence, Table I., or in Table II., where school marks were correlated with teachers' estimates of intelligence. There are 10 cases, all under the 70–74 school marks group and varying in I. Q. from the 110–114 I. Q. group to the 125–129 I. Q. group, which are below the median in school marks, although above the median in intelligence quotient. As 70 per cent. is the passing grade none of these pupils actually failed in their work, but through lack of application, irregular attendance, or some of the other numerous causes that enter into poor school work, failed to make records commensurate with their mental ability. Of the five cases having I. Q.'s below the median and earning marks above the median, two, those coming under the 90–94, and the 95–99 I. Q. groups and the 80–84 school marks group, were Filipino boys whose I. Q.'s were pulled down by their low scores in the vocabulary test. As they were older than their classmates and very ambitious they made excellent school marks. The other three cases come under the 100–104 I. Q. group and the 80–84, and 85–89 school marks groups. Although below the median in I. Q. they would be classified as having normal intelligence. Two of them are over age for the ninth grade, *i. e.*, have both chronological and mental ages over 15 years and 5 months, consequently might be expected to do better than average work in ninth grade subjects. In view of the above considerations a correlation of .545 is relatively high and constitutes additional proof of the reliability of the Stanford Revision of the Binet scale when applied to high school pupils.

V. AVERAGE SCHOOL MARKS OF HIGH SCHOOL PUPILS BY I. Q. GROUPS

In addition to working out the correlation between intelligence quotients and school marks the plan of averaging school marks by I. Q. groups to see if a low I. Q. generally means the earning of a correspondingly low school mark was also carried out and the results set forth in Table IV. For Table V. the method is reversed and the I. Q.'s of those earning marks within each school marks group are averaged.

TABLE IV

School Marks Averaged By I. Q. Groups

I. Q. Groups	Average Marks	No. of Cases
125 and over	83	12
115–124	81	19
105–114	76	24
95–104	74	28
85– 94	72	17
75– 84	63	2
Average of averages.	75	102

There is a steady progression in average grades from the lowest to the highest groups. While the differences in average marks between the various I. Q. groups are not large, they are sufficient to indicate a distinct tendency in the direction of high marks being earned by high I. Q. groups and low marks being earned by low I. Q. groups.

TABLE V

Intelligence Quotients Averaged According to School-mark Groups

School Mark Group	Average I. Q.	No. of Cases
50–59	84	2
60–69	100	16
70–79	107	56
80–89	110	24
90–99	123	4
Average of Averages.	105	102

In this arrangement of the data there is also apparent the close relationship between intelligence and school progress. The school marks groups used correspond roughly to the letters used by the teachers in grading, 50–59, "E"; 60–69, "D"; 70–79, "C"; 80–89. "B"; 90–99, "A." There are 16 points in I. Q. difference between those earning "E" and those earning "D." Likewise there is a 13 point difference between those earning "A" and those earning "B." Apparently a pupil needs to be very dull to classify as an "E" student and ex-

traordinarily bright to classify as an "A" student. The intermediate school-mark groups, 60–69, 70–79 and 80–89, cover between them only ten points on the I. Q. scale. It seems reasonable to conclude from Tables IV. and V. that the correlation of .545 between I. Q. and school marks represents a very marked tendency for intelligence to be reflected in school marks. Also it appears that I. Q.'s are more evenly distributed and that the steps between groups are less precipitous than is the case with the distribution of marks. This will be still more evident from the graphic representation of the facts given below.

VI. GRAPHIC REPRESENTATION OF DATA RELATING TO I. Q.'S, TEACHERS' ESTIMATES OF INTELLIGENCE AND SCHOOL MARKS

In arranging the data for purposes of graphic representation each distribution was divided into five groups: The teachers' estimates into groups corresponding to the divisions (1) very superior; (2), superior; (3), average; (4), inferior; (5), very inferior. The school marks into, "A," very superior; "B," superior; "C," average; "D," inferior; "E," very inferior. The intelligence quotients into groups, "125 and over," very superior; "110 to 124," superior; "95 to 109" average; "80 to 94," inferior; "below 80," very inferior. Fig. 4 represents the teachers' estimates of intelligence; Fig. 5, the I. Q.'s and Fig. 6, the school marks. The entire 107 cases were utilized in the diagrams, although only 102 cases were included in the correlations. This was on account of the fact that no cases were included in the correlations for which less than four marks or less than three teachers' estimates were available; but since the inclusion of the five cases would not have changed the correlations to any appreciable extent it was thought best to include all the cases in making the diagrams. All three diagrams are arranged on the same base-line with the one representing the I. Q. distribution in the middle in order that they may be easily compared. The grouping in each diagram is indicated on the horizontal axis, and the frequencies on the vertical axis.

Comparison of the three diagrams in the light of the per cent. of scores under each group gives us the following:

	Teachers' Estimates, Per Cent.	Intelligence Quotient, Per Cent.	School Marks, Per Cent.
Ver. inf.	.00	.95	1.90
Inferior	7.50	19.65	16.10
Average	51.50	39.00	55.00
Superior	31.50	29.00	23.50
Ver. sup.	9.50	11.50	3.50
	100.00	100.00	100.00

There are no "very inferior" cases in the teachers' estimates, only one in the "intelligence quotients," and only two in the "school marks" distribution. This is accounted for by the nature of the group of pupils under consideration. Since these are high school pupils we would expect to find that the majority of the "very inferiors" would have been eliminated by the time the first year in the high school was reached. Both the "intelligence quotients" and the "school marks" show over twice as many cases in the "inferior" group as are found in the "teachers' estimates." Apparently teachers incline to give the pupil the benefit of the doubt when estimating his intelligence and prefer to give "3's" rather than "4's" unless the inferiority is rather marked, or accompanied by some other unfavorable trait, such as unruliness, laziness or something of the sort. A pupil of inferior mental ability who works hard and is tractable will seldom, if ever, receive a "4" estimate at the hands of his teacher, either in the high school or grades. Both the "teachers' estimates" and the "school marks" exceed the "intelligence quotients" with respect to the "average" group, while the "estimates" and "I. Q.'s" exceed the "marks" in the "superior" and "very superior" groups.

While it is not possible from the diagrams to prove conclusively that the intelligence test is superior to either the teachers' estimates or the school marks as a means of judging mental capacity, it should be apparent from the results of the correlations of I. Q.'s with both of the other means of judging intelligence,

that the individual mental tests with the Stanford Revision of the Binet-Simon Scale give at least as satisfactory results as can be secured with either of the other methods. The significant point in favor of the mental test is that it can be administered in a few minutes while it takes a teacher several weeks usually to arrive at an estimate of the intelligence of the members of his class, and school marks are not available until the middle or end of a semester.

VII. RELIABILITY OF TESTS CONFIRMED BY RECORD OF ELIMINATION

As stated in the beginning the pupils tested belonged to the classes entering the Palo Alto High School during the school year 1916–17. In September, 1917, it was possible to check up the list and discover how many of the 107 pupils had failed to return. It was found that 27 had dropped out. Careful following up of those who had left school brought out the fact that 14 of them had taken transfers to other high schools, and could not properly be said to count as having been eliminated from high school attendance. The remaining 13 were found to have dropped out to go to work. Taken in alphabetical order their I. Q.'s were as follows: No. 1, 97; 2, 115; 3, 105; 4, 106; 5, 97; 6, 95; 7, 85; 8, 101; 9, 92; 10, 87; 11, 79; 12, 83; 13, 90. The average I. Q. of this group is 94.7. The only case above the general median (105–109) is no. 2, a boy with an I. Q. of 115 who had to work temporarily on account of family finances. He expects to return to high school within a year. Nos. 3 and 4 are the only cases coming within the general median. All the rest are below the general median. The average I. Q. of the 14 who took transfers to other high schools is 110. There is then a difference in average intelligence quotient of 15.3 points between those who left high school to go to work and those who merely transferred to some other high school. Considering the average school marks of the group that dropped out to go to work we find that they had an average school grade of 71 per cent. Seven, or 54 per cent. of them, received marks denoting absolute failure.

Elimination and mental capacity are thus seen to bear a very close relation to one another. The mere statement of the fact that these 13 pupils left high school to go to work, would not cover the real reason in more than a majority of the cases. The truth is that most of them quit school to go to work because they could not make a success of the school work. Seven of them had intelligence quotients below 95. If the principal of the high school had been in possession of that information at the beginning of the school year he would have advised them differently as to the type of work they should attempt during their first year in high school. As it was, all of them were required to take algebra. Some of them attempted Latin; others general science. Failure in these subjects could have been predicted for them with reasonable accuracy. In the light of the record of the year's work, failure was all that they managed to earn in nearly every instance.

An examination of the school success of all those who tested below 95 in intelligence quotient shows that 70 per cent. of them failed in more than one half of their subjects, and that in the instances where the failed and discouraged pupil did not drop out to go to work he failed of promotion and is repeating the failed work this year. There should be some better means of educational guidance for this group than the present plan of simply trying them out on the regular academic subjects and waiting to discover their mental ability through their failure to succeed in that type of work. If their time in high school is inevitably limited there is all the more reason for taking every precaution to see that it is spent on subjects that will be economically and socially useful to them.

VIII. THE DEVELOPMENT OF GROUP MENTAL TESTS ESSENTIAL

Enough has been done with the individual tests to demonstrate their reliability as a means of diagnosis of mental ability and to warrant their use by school administrators in educational guidance. However, the length of time consumed in testing a child makes such

use necessarily limited. It took an average of 1 hour and 15 minutes each to administer the 107 tests herein described. It can readily be seen that a busy high school principal is not going to find time to give the Binet tests to all his pupils, nor is it at all likely that high school boards will appropriate a sufficient amount of money to secure the services of a clinical psychologist to devote his entire time to the work of mental measurements. If mental tests are to be extensively employed in high school administration it is imperative that reliable group tests should be developed.

A group test of superior merit is now being perfected by army psychologists at Washington, D. C., which gives promise of becoming an effective tool for the rapid diagnosis of large groups of individuals It is easy to give, can be scored accurately and quickly in a mechanical way by intelligent office help, and the correlations between results secured in the use of the new group tests and individual tests are high. The revised military test is being applied to all the soldiers of the national army and it is safe to assume that through successive revisions it will be made as nearly perfect as it is possible to make it.

Until after the war, however, when the perfected military test will probably be released for general use it will be necessary to rely upon other mass tests. A very promising series of group tests is being developed by Mr. Arthur S. Otis, which will be known as "The Otis Absolute Point Scale for the Measurement of Intelligence." Mr. Otis has been working on this scale for several years in connection with his doctor's dissertation at Stanford University. It is being standardized, directions for giving and scoring which can be easily and accurately followed are being formulated, and the scale in pamphlet form should be ready for general use within a year. It has also been found that the vocabulary test of the Stanford Revision of the Binet scale correlates highly with the results by the entire scale. This vocabulary of 100 words could be printed on separate sheets and administered as a group test with good results. Satisfactory correlations have been secured, likewise, between the scores by the Binet scale and the results of the Trabue Completion tests "B" and "C." In order to obtain results that would approximate in accuracy and reliability the Binet scale it would be necessary to use a number of different group tests and equate the results. This could be done and still there would remain a large increment of time saved to the credit of the group method of intelligence testing as against the individual method.

IX. PRACTICAL RESULTS OF THE STUDY THUS FAR

During the progress of the testing work carried on by the writer in the Palo Alto High School he was frequently called into consultation with the principal and the vice-principal of the school in regard to special cases. One young lady who seemed to be at least average in mental ability had failed in every subject. A request was made that she be tested. Mr. Norton, who did not know at the time that the young lady had been failing in her school work, made the test. It was found that she had a mental age of 12 years and 8 months. Other tests than the Binet were applied with similar results. This information gave the high school authorities a much better basis for dealing with the case than they would otherwise have had. A number of similar instances convinced the principal of the school that it would be a valuable asset to the school in dealing with all those who had been given the tests if he had the results at hand for reference. The writer was requested to prepare a card index system of the test material for the private use of the principal and vice-principal. In addition to this all of the 8A pupils who were to enter the high school in February, 1918, were given the Binet tests by the writer, assisted by Miss Henry and Mr. Kohs. Supplementary information was secured regarding their grammar school records, their vocational ambitions, educational plans and the subjects which they would like to take up in the high school. Cards setting forth these facts in each individual case were prepared for the use of the class adviser and the vice-principal on registration day. When they entered the high school on February 4, their

study programs were made out and they were assigned to sections of the classes which they entered on the basis of ability. A splendid opportunity is thus afforded of determining experimentally the value of mental tests in educational guidance. The experiment will not be confined to the class just mentioned. Arrangements have been made to have a similar program carried out in regard to the eighth grade pupils who will enter the Palo Alto High School in September, 1918. The principals of four other high schools in the neighborhood of Stanford University, upon hearing of what was being done at the Palo Alto High School, requested that similar cards might be prepared for the eighth grade pupils tributary to their high schools who would be applying for admission this coming September. Sufficient funds for the carrying out of the plan have been secured, which makes it certain that about 400 pupils, who are to enter the high schools included in the scope of the experiment in September, 1918, will be guided in the selection of their studies in accordance with the results of the mental tests and other data that will be available for the use of their advisers.

The second phase of the experiment will consist of the making and recording of careful observations. Since there will be five groups representing varied types of community life and conditions as well as different sizes of high schools the results obtained should be significant, and considerable light should be thrown upon the question of the use of mental tests in educational guidance.

SUMMARY

Mental tests of 107 entering high school pupils (1916–17) reveal individual differences in mental age of from 12 years 8 months to 19 years, and in chronological age of from 13 years 1 month to 19 years 3 months. The highest mental age is made by a pupil 13 years 6 months of age chronologically, while the lowest mental age is made by a pupil 19 years 3 months of age chronologically. Not a single 13 year-old, chronologically, has a mental age below 14 years 4 months, but 74 per cent. of those who are over age, chronologically, for the ninth grade are below the median for the group in intelligence quotient. Hence it appears that overageness is vitally linked up with intelligence. Means of measuring intelligence with reasonable accuracy should therefore be at the disposal of every school administrator, high school as well as grade.

2. The reliability of the Stanford Revision of the Binet-Simon Intelligence Scale, when applied to high school pupils, is shown by the correlations obtained when the scores made in the mental tests are compared with other methods of measuring intelligence, *i. e.*, teachers' estimates and school marks. Table I. shows a correlation between teachers' estimates of intelligence and intelligence quotients of $+.586$; Table II. shows a correlation of $+.702$ between teachers' estimates of intelligence and school marks, indicating that they base their estimates upon class room performance; Table III. shows a correlation of $+.545$ between intelligence quotients and school marks. All correlations obtained by the Pearson short method, and the correlations are respectively 8.8, 13½ and 7.9 times as great as the probable errors. In the light of the possible explanations of the "$-xy$" variations, discussed in connection with each table, the correlations obtained can be regarded as sufficiently significant to justify the use of the Stanford Revision of the Binet Scale for purposes of preliminary mental diagnosis in connection with the educational guidance of high school pupils.

3. The reliability of the Binet tests is further shown in Tables IV. and V., where school marks are averaged by I. Q. groups and where intelligence quotients are averaged according to school-mark groups. Steady progression in average school marks is shown from the lowest to the highest I. Q. groups. There is also steady progression, although the intervals are more marked, in intelligence quotients from the lowest to the highest school-marks groups.

4. In Figs. 4, 5 and 6, where the distributions of teachers' estimates, intelligence quotients and school marks are divided for purposes of

comparison into five groups representing "very superior," "superior," "average," "inferior" and "very inferior," it is apparent that intelligence quotients and school marks give distributions more nearly approximating the standard curve of probability than is the case with the teachers' estimates of intelligence. Taken together with the data presented in Tables I. to V., the graphic representations support the conclusion that the intelligence quotients are at least as reliable as teachers' estimates or school marks in the measurement of intelligence. The advantage on the side of the mental tests is that they can be quickly administered and utilized for educational guidance at the very beginning of a school year, while school marks or teachers' estimates are not available for from six weeks to three months.

5. The possibility of predicting the success of high school pupils in their school tasks is illustrated by the record of elimination from the group of 107 tested. The average intelligence quotient of the 13 who dropped out to go to work was 94.7, or 10.3 points below the lower limit of the median for the whole number tested. The average school mark of the 13 pupils was only 71 per cent., and seven of them failed completely in more than half of their work. Again, 70 per cent. of the pupils, who had intelligence quotients below 95, failed in more than half of their work. Others who did not drop out failed of promotion and had to repeat the subjects in which they failed. Even a rough mental diagnosis such as could have been secured by using one or more simple group tests, if applied at the beginning of the school year 1916–17, would have enabled the advisers of that group of high school pupils to help them plan their courses of study to much greater advantage.

5. A practical demonstration of the value of mental tests in educational guidance is being carried out in the Palo Alto High School and four other high schools in the vicinity of Stanford University. The mid-year entering class of the Palo Alto High School were given the mental tests while still in the 8A grade and they were advised as to their courses of study in accordance with these findings as to their ability. All of the entering classes in the five cooperating high schools for the term beginning in September, 1918, will have been given mental tests and will have their courses planned and be grouped according to ability in much the same manner. The results of this second phase of the experiment in educational guidance will be reported at a later date. The number and variety of schools undertaking to put into operation such a plan should make it possible to arrive at some fairly definite conclusions as to the value of mental tests in the educational guidance of high school pupils.

WM. M. PROCTOR
STANFORD UNIVERSITY

SOCIETIES AND MEETINGS

THE NATIONAL EDUCATION ASSOCIATION DEPARTMENT OF RURAL AND AGRICULTURAL EDUCATION

The birth and childhood of vocational education with a forcast of its development during adolescence: David Snedden, professor of education Teachers College, Columbia University.

Professor Snedden said in part: "The last fifteen years have been the toddling, teething stage of growth of vocational education. It has naturally been subject to many of the diseases of childhood. At times it was not certain that the infant would live; and some have doubted whether it was worth raising. The present writer can say with good grace that it has been a noisy brat; and he is well aware that some of its foster nurses have made uninterested people rather tired by their predictions as to how the infant would some day become a lusty youth who would whip the other and less vulgar youths in the vicinity and even make some respectable older folks look to their laurels. Since the whole-hearted entry of the national government into the support and partial direction of vocational education of the kinds here under discussion, the entire situation has assumed a new aspect. The infant is no longer regarded as a foundling and interloper. He is growing, and learning fast. We can see now that, while he will not meekly con-

fine himself to a corner, neither is he likely to become a bully, even if in a few cases he is given for a while the food and freedom of "dual control." He is really capable of being civilized, even though our refined schoolmaster senses will long object to the work-a-day clothing that he must perforce wear, and to the odors of a machine shop and stable that necessarily cling to him." One of the largest illustrations now prevalent in vocational education is that a vocation, once entered upon by a young person, must be followed through life. The fact is that modern life is organized very much on a series of occupational levels, and naturally, the beginner enters upon some level adapted to his immaturity and inexperience. No one seriously expects a girl of sixteen to be school principal or a housewife; yet in many states more than half of all girls at sixteen have already entered upon full time wage earning in callings that are truly juvenile occupations. No one expects a youth of eighteen to be a locomotive engineer, a machine shop foreman or a contractor. The man who is the typical farmer at the age of forty was probably a hired worker on a farm (his father's or another's) from sixteen to twenty-five, then a tenant or renter farmer and, in middle life, a farmer managing his own land and capital. In all our great manufacturing callings there exists sometimes scores of levels indicated by varying wage rates, and, to a large extent, advancement from one to the other is effected on the basis of increasing maturity and experience, and would be greatly simplified and expedited if, preliminary to each new level, adequate specific vocational training could be provided. Even in the so-called skilled trades—which are almost everywhere undergoing an inevitable economic decline—the age of effective entry on apprenticeship is rising. Anciently in Europe it was in what we would now call childhood's year, and it is still as low as fourteen there. In America apprenticeship is rarely begun before sixteen. and in many cases eighteen is now preferred; yet many of those who must eventually become artisans are under necessity of contributing to their own self-support from the age of eighteen onwards."

Home project work too small—something bigger needed—a substitute in operation: W. S. Welles, director school of educational Agriculture and state supervisor vocational agricultural instruction for Wisconsin, River Falls, Wis.

The farmer's son should be worked on a profit-sharing basis, the same as the farmer takes his hired men into partnership. Almost every farmer is anxious to have his son happy and contented on the farm. If the farmer's son were given a vital interest in farm work, were permitted to share farm profits, he could not be induced to leave the farm.

The farmer's boy must get practical training in the agricultural school. County agricultural education must be of such a nature as to appeal to the intelligent farmer. The farmers have sense enough to know the difference between practical education and education that gets no results. The farm boy who after agricultural training despises work on the farm has been poorly taught. The best agricultural training will make the boy want to return to the farm, there to work out the problems of farm and country life.

There will be no shortage of farm help if the farm boys and hired men are employed on the profit-sharing basis. The farmer's son must learn not merely how to raise one crop or how to handle one set of machinery, but he must be familiar with all the items that make up farm business anl farm practise. He must learn how to manage all the business of the farm, to take care of each farm project in its turn. The farmer's boy must learn more than he can learn in corn clubs, pig clubs, butter clubs or chicken clubs. He must learn farm management and how to become an all round good neighbor in a farm community. Instruction in the school then must not be based merely on isolated projects, but must in addition bring the boy in contact with farm work and farm practise on the farms themselves. In the last analysis the farm itself is the greatest educational laboratory for the farmer's son.

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